

16/10/200316:24protein purification.trn

FULL ESTIMATED COST

0.06

0.69

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FILE COVERS 1907 - 2 Oct 2003 VOL 139 ISS 14
FILE LAST UPDATED: 1 Oct 2003 (20031001/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> E GONZALEZ VILLASENOR LUCIA IRENE/AU 25
E1      1      GONZALEZ VILLASENOR IRENE/AU
E2      5      GONZALEZ VILLASENOR L I/AU
E3      10 --> GONZALEZ VILLASENOR LUCIA IRENE/AU
E4      2      GONZALEZ VILLEGAS S/AU
E5      2      GONZALEZ VILLELA REBECA/AU
E6      1      GONZALEZ VINAS M/AU
E7      14     GONZALEZ VINAS M A/AU
E8      1      GONZALEZ VINAS MIGUEL A/AU
E9      2      GONZALEZ VINAS MIGUEL ANGEL/AU
E10     4      GONZALEZ VINAS W/AU
E11     12     GONZALEZ VIRGILIO/AU
E12     3      GONZALEZ VIRGILIO A/AU
E13     2      GONZALEZ VIRGILIO LUIS/AU
E14     2      GONZALEZ VIRGILIO MENDOZA/AU
E15     1      GONZALEZ VIRGINIA/AU
E16     1      GONZALEZ VIRGINIA M/AU
E17     2      GONZALEZ VIRNA/AU
E18     1      GONZALEZ VISITACION LOPEZ MIRANDA/AU
E19     1      GONZALEZ VIVEROS M TERESA/AU
E20     4      GONZALEZ W/AU
E21     2      GONZALEZ W A/AU
E22     7      GONZALEZ W D/AU
E23     17     GONZALEZ WALTER/AU
E24     2      GONZALEZ WALTER D/AU
E25     1      GONZALEZ WALTTER LOPEZ/AU
```

```
=> S (E3) AND 0000<=PY<=2001
      10 "GONZALEZ VILLASENOR LUCIA IRENE"/AU
      21538624 0000<=PY<=2001
L1      9 ("GONZALEZ VILLASENOR LUCIA IRENE"/AU) AND 0000<=PY<=2001
```

=> d ti 1-9

16/10/200316:24protein purification.trn

L1 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Antibodies for growth hormone and prolactin using multiple antigen peptide immunogens

L1 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Screening for specific recombinant clones

L1 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Effect of growth hormone on the growth rate of the gilthead seabream (*Sparus aurata*), and use of different constructs for the production of transgenic fish

L1 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Mitochondrial DNA restriction site polymorphisms in the teleost *Fundulus heteroclitus* support secondary intergradation

L1 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Gene transfer, expression and inheritance of pRSV-rainbow trout-GH cDNA in the common carp, *Cyprinus carpio* (Linnaeus)

L1 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Molecular cloning and sequencing of coho salmon growth hormone cDNA

L1 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Characterization of cloned mitochondrial DNA from the teleost *Fundulus heteroclitus* and its usefulness as an interspecies hybridization probe

L1 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI A multilocus system for studying tissue and subcellular specialization. The pH and temperature dependence of the two major NADP-dependent isocitrate dehydrogenase isoenzymes of the fish *Fundulus heteroclitus*

L1 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI A multilocus system for studying tissue and subcellular specialization. The three NADP-dependent isocitrate dehydrogenase isozymes of the fish *Fundulus heteroclitus*

=> d ab 2

L1 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
AB A review with 207 refs. on the application of nucleic acid and antibody probes for screening specific recombinant clones isolated from recombinant libraries. Topics include: section of a DNA library for screening recombinant clones; cloning of large genes and gene clusters; screening by nucleic acid hybridization; use of synthetic oligonucleotide probes; screening by PCR; screening on the basis of expressed protein by ligand binding activity and immunol. methods.

=> e2

L2 5 "GONZALEZ VILLASENOR L I"/AU

=> d ti 1-5

L2 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
TI A solid phase plate assay for HIV-1 genotyping

L2 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN

16/10/200316:24protein purification.trn

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FILE COVERS 1907 - 7 Oct 2003 VOL 139 ISS 15
FILE LAST UPDATED: 6 Oct 2003 (20031006/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> E GONZALEZ VILLASENSOR LUCIA/AU 25

E1	5	GONZALEZ VILLASENOR L I/AU
E2	10	GONZALEZ VILLASENOR LUCIA IRENE/AU
E3	0 -->	GONZALEZ VILLASENSOR LUCIA/AU
E4	2	GONZALEZ VILLEGAS S/AU
E5	2	GONZALEZ VILLELA REBECA/AU
E6	1	GONZALEZ VINAS M/AU
E7	14	GONZALEZ VINAS M A/AU
E8	1	GONZALEZ VINAS MIGUEL A/AU
E9	2	GONZALEZ VINAS MIGUEL ANGEL/AU
E10	4	GONZALEZ VINAS W/AU
E11	12	GONZALEZ VIRGILIO/AU
E12	3	GONZALEZ VIRGILIO A/AU
E13	2	GONZALEZ VIRGILIO LUIS/AU
E14	2	GONZALEZ VIRGILIO MENDOZA/AU
E15	1	GONZALEZ VIRGINIA/AU
E16	1	GONZALEZ VIRGINIA M/AU
E17	2	GONZALEZ VIRNA/AU
E18	1	GONZALEZ VISITACION LOPEZ MIRANDA/AU
E19	1	GONZALEZ VIVEROS M TERESA/AU
E20	4	GONZALEZ W/AU
E21	2	GONZALEZ W A/AU
E22	7	GONZALEZ W D/AU
E23	17	GONZALEZ WALTER/AU
E24	2	GONZALEZ WALTER D/AU
E25	1	GONZALEZ WALTTER LOPEZ/AU

=> (E1 and E2) and NaOH

	5	"GONZALEZ VILLASENOR L I"/AU
	10	"GONZALEZ VILLASENOR LUCIA IRENE"/AU
	335406	NAOH
	3	NAOHS
	335407	NAOH
		(NAOH OR NAOHS)
L1	0	("GONZALEZ VILLASENOR L I"/AU AND "GONZALEZ VILLASENOR LUCIA IRENE"/AU) AND NAOH

=> (E1 and E2) and NaOH

	5	"GONZALEZ VILLASENOR L I"/AU
	10	"GONZALEZ VILLASENOR LUCIA IRENE"/AU
	335406	NAOH
	3	NAOHS
	335407	NAOH
		(NAOH OR NAOHS)
L2	0	("GONZALEZ VILLASENOR L I"/AU AND "GONZALEZ VILLASENOR LUCIA IRENE"/AU) AND NAOH

16/10/200316:24protein purification.trn

IRENE"/AU) AND NAOH

=> (E1 and E2) and (inclusion with bodies)

5 "GONZALEZ VILLASENOR L I"/AU

10 "GONZALEZ VILLASENOR LUCIA IRENE"/AU

93495 INCLUSION

58928 INCLUSIONS

130960 INCLUSION

(INCLUSION OR INCLUSIONS)

98599 BODIES

5004 INCLUSION WITH BODIES

(INCLUSION(1W)BODIES)

L3 0 ("GONZALEZ VILLASENOR L I"/AU AND "GONZALEZ VILLASENOR LUCIA
IRENE"/AU) AND (INCLUSION WITH BODIES)

=> E1 and (inclusion with bodies)

5 "GONZALEZ VILLASENOR L I"/AU

93495 INCLUSION

58928 INCLUSIONS

130960 INCLUSION

(INCLUSION OR INCLUSIONS)

98599 BODIES

5004 INCLUSION WITH BODIES

(INCLUSION(1W)BODIES)

L4 0 "GONZALEZ VILLASENOR L I"/AU AND (INCLUSION WITH BODIES)

=> E1 and (protein with purification)

5 "GONZALEZ VILLASENOR L I"/AU

1554309 PROTEIN

1066821 PROTEINS

1799219 PROTEIN

(PROTEIN OR PROTEINS)

295650 PURIFICATION

880 PURIFICATIONS

296238 PURIFICATION

(PURIFICATION OR PURIFICATIONS)

250909 PURIFN

232 PURIFNS

251012 PURIFN

(PURIFN OR PURIFNS)

426444 PURIFICATION

(PURIFICATION OR PURIFN)

8226 PROTEIN WITH PURIFICATION

(PROTEIN(1W)PURIFICATION)

L5 0 "GONZALEZ VILLASENOR L I"/AU AND (PROTEIN WITH PURIFICATION)

=> E1

L6 5 "GONZALEZ VILLASENOR L I"/AU

=> d ti

L6 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN

TI A solid phase plate assay for HIV-1 genotyping

=> d ti 1-5

L6 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN

TI A solid phase plate assay for HIV-1 genotyping

16/10/200316:24protein purification.trn

L6 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
TI A duplex PCR assay for detection and genotyping of Herpes simplex virus in cerebrospinal fluid

L6 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
TI Production of a biologically active recombinant teleostean growth hormone in E. coli cells

L6 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
TI Gene transfer, expression and inheritance of rainbow trout and human growth hormone genes in carp and loach

L6 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
TI Evolutionary implications of two rainbow trout growth hormone genes

=> e2

L7 10 "GONZALEZ VILLASENOR LUCIA IRENE"/AU

=> d 1-10

L7 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:696439 CAPLUS
DN 139:212998
TI Methods for the solubilization and recovery of recombinant proteins
IN **Gonzalez-Villasenor, Lucia Irene**
PA USA
SO U.S. Pat. Appl. Publ., 21 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	US 2003166062	A1	20030904	US 2002-80919	20020222
PRAI	US 2001-270839P	P	20010223		

L7 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1999:462109 CAPLUS
DN 131:241724
TI Antibodies for growth hormone and prolactin using multiple antigen peptide immunogens
AU **Gonzalez-Villasenor, Lucia Irene**; Chen, Thomas T.
CS BBI-Biotech Research Laboratories, Gaithersburg, MD, 20877, USA
SO Marine Biotechnology (1999), 1(3), 211-220
CODEN: MABIFW; ISSN: 1436-2228
PB Springer-Verlag New York Inc.
DT Journal
LA English
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1998:500502 CAPLUS
DN 129:255554
TI Screening for specific recombinant clones
AU **Gonzalez-Villasenor, Lucia Irene**; Manak, Mark M.
CS BBI-Biotech Research Laboratories, Inc., Gaithersburg, MD, USA

16/10/200316:24protein purification.trn

SO Recombinant DNA Principles and Methodologies (1998), 579-638. Editor(s):
Greene, James J.; Rao, Venigalla B. Publisher: Dekker, New York, N. Y.
CODEN: 66MCAE
DT Conference; General Review
LA English
RE.CNT 190 THERE ARE 190 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1993:445689 CAPLUS
DN 119:45689
TI Effect of growth hormone on the growth rate of the gilthead seabream
(Sparus aurata), and use of different constructs for the production of
transgenic fish
AU Cavari, Benzion; Funkenstein, Bruria; Chen, Thomas T.;
Gonzalez-Villasenor, Lucia Irene; Scharf, Manfred
CS Israel Oceanographic and Limnological Research, Haifa, Israel
SO Aquaculture (1993), 111(1-4), 189-97
CODEN: AQCLAL; ISSN: 0044-8486
DT Journal
LA English

L7 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1990:192958 CAPLUS
DN 112:192958
TI Mitochondrial DNA restriction site polymorphisms in the teleost Fundulus
heteroclitus support secondary intergradation
AU **Gonzalez-Villasenor, Lucia Irene**; Powers, Dennis A.
CS Dep. Biol., Johns Hopkins Univ., Baltimore, MD, 21218, USA
SO Evolution (Lawrence, KS, United States) (1990), 44(1), 27-37
CODEN: EVOLAO; ISSN: 0014-3820
DT Journal
LA English

L7 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1990:173590 CAPLUS
DN 112:173590
TI Gene transfer, expression and inheritance of pRSV-rainbow trout-GH cDNA in
the common carp, Cyprinus carpio (Linnaeus)
AU Zhang, Peijung; Hayat, Mohammad; Joyce, Christopher;
Gonzalez-Villasenor, Lucia Irene; Lin, C. M.; Dunham, Rex A.;
Chen, Thomas T.; Powers, Dennis A.
CS Hopkins Mar. Stn., Stanford Univ., Pacific Grove, CA, USA
SO Molecular Reproduction and Development (1990), 25(1), 3-13
CODEN: MREDEE; ISSN: 1040-452X
DT Journal
LA English

L7 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1988:505725 CAPLUS
DN 109:105725
TI Molecular cloning and sequencing of coho salmon growth hormone cDNA
AU **Gonzalez-Villasenor, Lucia Irene**; Zhang, Peijun; Chen, Thomas
T.; Powers, Dennis A.
CS Dep. Biol., Johns Hopkins Univ., Baltimore, MD, 21219, USA
SO Gene (1988), 65(2), 239-46
CODEN: GENED6; ISSN: 0378-1119
DT Journal
LA English

16/10/200316:24protein purification.trn

L7 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1986:620055 CAPLUS
DN 105:220055
TI Characterization of cloned mitochondrial DNA from the teleost Fundulus heteroclitus and its usefulness as an interspecies hybridization probe
AU **Gonzalez-Villasenor, Lucia Irene**; Burkhoff, Amanda M.; Corces, Victor; Powers, Dennis A.
CS McCollum-Pratt Inst., Johns Hopkins Univ., Baltimore, MD, 21218, USA
SO Canadian Journal of Fisheries and Aquatic Sciences (1986), 43(10), 1866-72
CODEN: CJFSDX; ISSN: 0706-652X
DT Journal
LA English

L7 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1986:567787 CAPLUS
DN 105:167787
TI A multilocus system for studying tissue and subcellular specialization. The pH and temperature dependence of the two major NADP-dependent isocitrate dehydrogenase isoenzymes of the fish Fundulus heteroclitus
AU **Gonzalez-Villasenor, Lucia Irene**; Powers, Dennis A.
CS McCollum-Pratt Inst., Johns Hopkins Univ., Baltimore, MD, 21218, USA
SO Journal of Biological Chemistry (1986), 261(25), 11471-7
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

L7 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:518596 CAPLUS
DN 103:118596
TI A multilocus system for studying tissue and subcellular specialization. The three NADP-dependent isocitrate dehydrogenase isozymes of the fish Fundulus heteroclitus
AU **Gonzalez-Villasenor, Lucia Irene**; Powers, Dennis A.
CS McCollum-Pratt Inst., Johns Hopkins Univ., Baltimore, MD, 21218, USA
SO Journal of Biological Chemistry (1985), 260(16), 9106-13
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	49.16	49.37

FILE 'STNGUIDE' ENTERED AT 17:14:37 ON 07 OCT 2003
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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Oct 3, 2003 (20031003/UP).

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.12	49.49

16/10/200316:24protein purification.trn

STN INTERNATIONAL LOGOFF AT 17:15:41 ON 07 OCT 2003

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal653rbm

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	SEP 09	CA/CAPLUS records now contain indexing from 1907 to the present
NEWS	4	Jul 15	Data from 1960-1976 added to RDISCLOSURE
NEWS	5	Jul 21	Identification of STN records implemented
NEWS	6	Jul 21	Polymer class term count added to REGISTRY
NEWS	7	Jul 22	INPADOC: Basic index (/BI) enhanced; Simultaneous Left and Right Truncation available
NEWS	8	AUG 05	New pricing for EUROPATFULL and PCTFULL effective August 1, 2003
NEWS	9	AUG 13	Field Availability (/FA) field enhanced in BEILSTEIN
NEWS	10	AUG 15	PATDPAFULL: one FREE connect hour, per account, in September 2003
NEWS	11	AUG 15	PCTGEN: one FREE connect hour, per account, in September 2003
NEWS	12	AUG 15	RDISCLOSURE: one FREE connect hour, per account, in September 2003
NEWS	13	AUG 15	TEMA: one FREE connect hour, per account, in September 2003
NEWS	14	AUG 18	Data available for download as a PDF in RDISCLOSURE
NEWS	15	AUG 18	Simultaneous left and right truncation added to PASCAL
NEWS	16	AUG 18	FROSTI and KOSMET enhanced with Simultaneous Left and Right Truncation
NEWS	17	AUG 18	Simultaneous left and right truncation added to ANABSTR
NEWS	18	SEP 22	DIPPR file reloaded
NEWS	19	SEP 25	INPADOC: Legal Status data to be reloaded
NEWS	20	SEP 29	DISSABS now available on STN
NEWS EXPRESS			OCTOBER 01 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
NEWS INTER			General Internet Information
NEWS LOGIN			Welcome Banner and News Items
NEWS PHONE			Direct Dial and Telecommunication Network Access to STN
NEWS WWW			CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 09:31:49 ON 08 OCT 2003

=> filr caplus

THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE

Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.42	0.42

FILE 'CAPLUS' ENTERED AT 09:32:45 ON 08 OCT 2003

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FILE COVERS 1907 - 8 Oct 2003 VOL 139 ISS 15

FILE LAST UPDATED: 7 Oct 2003 (20031007/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> solubilization with solution

30365 SOLUBILIZATION

58 SOLUBILIZATIONS

30380 SOLUBILIZATION

(SOLUBILIZATION OR SOLUBILIZATIONS)

223220 SOLUTION

259454 SOLUTIONS

469427 SOLUTION

(SOLUTION OR SOLUTIONS)

2013933 SOLN

955352 SOLNS

2554375 SOLN

(SOLN OR SOLNS)

16/10/200316:24protein purification.trn

2650615 SOLUTION
(SOLUTION OR SOLN)
L1 115 SOLUBILIZATION WITH SOLUTION
(SOLUBILIZATION(1W) SOLUTION)

=> inclusion with bodies
93512 INCLUSION
58934 INCLUSIONS
130978 INCLUSION
(INCLUSION OR INCLUSIONS)
98606 BODIES
L2 5006 INCLUSION WITH BODIES
(INCLUSION(1W) BODIES)

=> sodium and hydroxide
903357 SODIUM
34 SODIUMS
903367 SODIUM
(SODIUM OR SODIUMS)
235043 HYDROXIDE
40898 HYDROXIDES
255420 HYDROXIDE
(HYDROXIDE OR HYDROXIDES)
L3 89309 SODIUM AND HYDROXIDE

=> l1 and l2 and l3
L4 1 L1 AND L2 AND L3

=> d 1

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:696439 CAPLUS
DN 139:212998
TI Methods for the solubilization and recovery of recombinant proteins
IN Gonzalez-Villasenor, Lucia Irene
PA USA
SO U.S. Pat. Appl. Publ., 21 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003166062	A1	20030904	US 2002-80919	20020222
PRAI	US 2001-270839P	P	20010223		

=>
=> solubilization with buffer
30365 SOLUBILIZATION
58 SOLUBILIZATIONS
30380 SOLUBILIZATION
(SOLUBILIZATION OR SOLUBILIZATIONS)
197793 BUFFER
26527 BUFFERS
212317 BUFFER
(BUFFER OR BUFFERS)
L5 41 SOLUBILIZATION WITH BUFFER
(SOLUBILIZATION(1W) BUFFER)

16/10/200316:24protein purification.trn

=> (sodium with hydroxide) or (NaOH)

903357 SODIUM

34 SODIUMS

903367 SODIUM

(SODIUM OR SODIUMS)

235043 HYDROXIDE

40898 HYDROXIDES

255420 HYDROXIDE

(HYDROXIDE OR HYDROXIDES)

69166 SODIUM WITH HYDROXIDE

(SODIUM(1W)HYDROXIDE)

335417 NAOH

3 NAOHS

335418 NAOH

(NAOH OR NAOHS)

L6 364015 (SODIUM WITH HYDROXIDE) OR (NAOH)

=> 14 and 15

L7 0 L4 AND L5

=> 15 and 16

L8 1 L5 AND L6

=> d 1

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN

AN 2002:841319 CAPLUS

DN 138:52213

TI Solubilization of trichloroacetic acid (TCA) precipitated microbial proteins via **NaOH** for two-dimensional electrophoresis

AU Nandakumar, M. P.; Shen, Jie; Raman, Babu; Marten, Mark R.

CS Department of Chemical & Biochemical Engineering, University of Maryland, Baltimore, MD, 21250, USA

SO Journal of Proteome Research (2003), 2(1), 89-93

CODEN: JPROBS; ISSN: 1535-3893

PB American Chemical Society

DT Journal

LA English

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib 1

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN

AN 2002:841319 CAPLUS

DN 138:52213

TI Solubilization of trichloroacetic acid (TCA) precipitated microbial proteins via **NaOH** for two-dimensional electrophoresis

AU Nandakumar, M. P.; Shen, Jie; Raman, Babu; Marten, Mark R.

CS Department of Chemical & Biochemical Engineering, University of Maryland, Baltimore, MD, 21250, USA

SO Journal of Proteome Research (2003), 2(1), 89-93

CODEN: JPROBS; ISSN: 1535-3893

PB American Chemical Society

DT Journal

LA English

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ab 1

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
 AB In prepg. intracellular microbial samples for one- or two-dimensional electrophoresis, trichloroacetic acid (TCA) pptn. is frequently used to remove interfering compds. Solubilization of TCA ppt. typically requires the addn. of a no. of chaotropes or detergents, in a multistep process, that requires hours to carry out. In this study, a simple, rapid, one-step method to solubilize TCA pptd. proteins is presented. Pptd. proteins are pretreated with 0.2 M **NaOH** for less than 5 min, followed by addn. of std. sample **solubilization buffer** (SSSB). When compared to solubilization with SSSB alone, **NaOH** pretreatment of TCA-pptd. intracellular protein from *Aspergillus oryzae* and *Escherichia coli* shows an approx. 5-fold increase in sol. protein. In addn., two-dimensional gel electrophoresis on resolubilized proteins shows an equiv. no. of proteins in samples with and without **NaOH** pretreatment.

=> d all 1

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
 AN 2002:841319 CAPLUS
 DN 138:52213
 TI Solubilization of trichloroacetic acid (TCA) precipitated microbial proteins via **NaOH** for two-dimensional electrophoresis
 AU Nandakumar, M. P.; Shen, Jie; Raman, Babu; Marten, Mark R.
 CS Department of Chemical & Biochemical Engineering, University of Maryland, Baltimore, MD, 21250, USA
 SO Journal of Proteome Research (2003), 2(1), 89-93
 CODEN: JPROBS; ISSN: 1535-3893
 PB American Chemical Society
 DT Journal
 LA English
 CC 9-7 (Biochemical Methods)
 Section cross-reference(s): 10, 16
 AB In prepg. intracellular microbial samples for one- or two-dimensional electrophoresis, trichloroacetic acid (TCA) pptn. is frequently used to remove interfering compds. Solubilization of TCA ppt. typically requires the addn. of a no. of chaotropes or detergents, in a multistep process, that requires hours to carry out. In this study, a simple, rapid, one-step method to solubilize TCA pptd. proteins is presented. Pptd. proteins are pretreated with 0.2 M **NaOH** for less than 5 min, followed by addn. of std. sample **solubilization buffer** (SSSB). When compared to solubilization with SSSB alone, **NaOH** pretreatment of TCA-pptd. intracellular protein from *Aspergillus oryzae* and *Escherichia coli* shows an approx. 5-fold increase in sol. protein. In addn., two-dimensional gel electrophoresis on resolubilized proteins shows an equiv. no. of proteins in samples with and without **NaOH** pretreatment.
 ST trichloroacetate pptd microbial protein **NaOH** electrophoresis
 IT *Aspergillus oryzae*
Escherichia coli
 (solubilization of trichloroacetic acid (TCA) pptd. microbial proteins via **NaOH** for two-dimensional electrophoresis)
 IT Proteins

16/10/200316:24protein purification.trn

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(solubilization of trichloroacetic acid (TCA) pptd. microbial proteins via **NaOH** for two-dimensional electrophoresis)

IT Electrophoresis
Gel electrophoresis
(two-dimensional; solubilization of trichloroacetic acid (TCA) pptd. microbial proteins via **NaOH** for two-dimensional electrophoresis)

IT 76-03-9, Trichloroacetic acid, uses 1310-73-2, **Sodium hydroxide (NaOH)**, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solubilization of trichloroacetic acid (TCA) pptd. microbial proteins via **NaOH** for two-dimensional electrophoresis)

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (2) Anon; Pharmacia 2-D Electrophoresis Using Immobilized Ph Gradients-Principles & Methods 2002
- (3) Delisa, M; Biotechnol Bioeng 1999, V65, P54 CAPLUS
- (4) Gorg, A; Electrophoresis 1997, V18, P328 CAPLUS
- (5) Guy, G; Electrophoresis 1994, V15, P417 CAPLUS
- (6) Hames, B; Gel Electrophoresis of Proteins A Practical Approach 1981, P1
- (7) Harder, A; Electrophoresis 1999, V20, P826 CAPLUS
- (8) Herbert, B; Electrophoresis 1998, V19, P845 CAPLUS
- (9) Herbert, B; Electrophoresis 1999, V20, P660 CAPLUS
- (10) Jacobs, D; Proteomics 2001, V1, P1345 CAPLUS
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- (17) Pridmore, A; Lett in Applied Microbiology 1999, V28, P245 CAPLUS
- (18) Rabilloud, T; Electrophoresis 1996, V17, P813 CAPLUS
- (19) Rabilloud, T; Electrophoresis 1997, V18, P837
- (20) Raman, B; Electrophoresis 2002, V23, P2194 CAPLUS
- (21) Riesenbergl, D; J Biotechnol 1991, V20, P17 CAPLUS
- (22) Shevchenko, A; Anal Chem 1996, V68, P850 CAPLUS

=> file biosis

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 1 October 2003 (20031001/ED)

16/10/200316:24protein purification.trn

=> 15 and 16

12589 SOLUBILIZATION
22 SOLUBILIZATIONS
12601 SOLUBILIZATION
(SOLUBILIZATION OR SOLUBILIZATIONS)
60195 BUFFER
8873 BUFFERS
66052 BUFFER
(BUFFER OR BUFFERS)
30 SOLUBILIZATION WITH BUFFER
(SOLUBILIZATION(1W)BUFFER)
334605 SODIUM
4 SODIUMS
334606 SODIUM
(SODIUM OR SODIUMS)
14838 HYDROXIDE
854 HYDROXIDES
15485 HYDROXIDE
(HYDROXIDE OR HYDROXIDES)
4508 SODIUM WITH HYDROXIDE
(SODIUM(1W)HYDROXIDE)
6924 NAOH
1 L5 AND L6

L9

=> d ti

L9 ANSWER 1 OF 1 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI Solubilization of trichloroacetic acid (TCA) precipitated microbial
proteins via **NaOH** for two-dimensional electrophoresis.

=> FIL MEDLINE

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	5.88	54.08
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-1.30

FILE 'MEDLINE' ENTERED AT 10:08:09 ON 08 OCT 2003

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On April 13, 2003, MEDLINE was reloaded. See HELP RLOAD for details.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
MeSH 2003 vocabulary. See <http://www.nlm.nih.gov/mesh/changes2003.html>
for a description on changes.

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> 15 and 16

8101 SOLUBILIZATION
12 SOLUBILIZATIONS
8109 SOLUBILIZATION
(SOLUBILIZATION OR SOLUBILIZATIONS)

16/10/200316:24protein purification.trn

```
44163 BUFFER
19151 BUFFERS
57458 BUFFER
      (BUFFER OR BUFFERS)
25 SOLUBILIZATION WITH BUFFER
      (SOLUBILIZATION(1W) BUFFER)
282012 SODIUM
5 SODIUMS
282012 SODIUM
      (SODIUM OR SODIUMS)
12780 HYDROXIDE
3725 HYDROXIDES
15459 HYDROXIDE
      (HYDROXIDE OR HYDROXIDES)
3576 SODIUM WITH HYDROXIDE
      (SODIUM(1W) HYDROXIDE)
3072 NAOH
L10 1 L5 AND L6
```

=> d ti

```
L10 ANSWER 1 OF 1 MEDLINE on STN
TI Solubilization of trichloroacetic acid (TCA) precipitated microbial
proteins via naOH for two-dimensional electrophoresis.
```

=> buffer

```
44163 BUFFER
19151 BUFFERS
L11 57458 BUFFER
      (BUFFER OR BUFFERS)
```

=> inclusion with bodies

```
49203 INCLUSION
10672 INCLUSIONS
56078 INCLUSION
      (INCLUSION OR INCLUSIONS)
93843 BODIES
L12 15538 INCLUSION WITH BODIES
      (INCLUSION(1W) BODIES)
```

=> (sodium (w) hydroxide) or NaOH

```
282012 SODIUM
5 SODIUMS
282012 SODIUM
      (SODIUM OR SODIUMS)
12780 HYDROXIDE
3725 HYDROXIDES
15459 HYDROXIDE
      (HYDROXIDE OR HYDROXIDES)
3573 SODIUM (W) HYDROXIDE
3072 NAOH
L13 6065 (SODIUM (W) HYDROXIDE) OR NAOH
```

=> l11 and l12 and l13

```
L14 1 L11 AND L12 AND L13
```

=> d ti

16/10/200316:24protein purification.trn

L14 ANSWER 1 OF 1 MEDLINE on STN

TI Expression, purification and initial characterization of the recombinant storage protein precursor of Theobroma cacao.

=> d ab 1

L14 ANSWER 1 OF 1 MEDLINE on STN

AB The gene encoding the 67-kDa cocoa storage protein precursor has been cloned from Theobroma cacao and expressed in Escherichia coli using the pET expression system. The recombinant storage protein has been renatured from **inclusion bodies** at 30 degrees C using 20 mM glycine-**NaOH buffer**, pH 10.0, containing 1 mM oxidized glutathione and 0.1% Brij. The renatured protein was purified and demonstrated to adopt a stable native conformation by optical spectroscopy. Secondary structure analysis from circular dichroism indicated the protein to be 23% alpha-helix and 38% beta-sheet, in close agreement with values obtained using a secondary structure prediction program.

=>

=>

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NEWS	3	SEP 09	CA/CAPLUS records now contain indexing from 1907 to the present
NEWS	4	Jul 15	Data from 1960-1976 added to RDISCLOSURE
NEWS	5	Jul 21	Identification of STN records implemented
NEWS	6	Jul 21	Polymer class term count added to REGISTRY
NEWS	7	Jul 22	INPADOC: Basic index (/BI) enhanced; Simultaneous Left and Right Truncation available
NEWS	8	AUG 05	New pricing for EUROPATFULL and PCTFULL effective August 1, 2003
NEWS	9	AUG 13	Field Availability (/FA) field enhanced in BEILSTEIN
NEWS	10	AUG 15	PATDPAFULL: one FREE connect hour, per account, in September 2003
NEWS	11	AUG 15	PCTGEN: one FREE connect hour, per account, in September 2003
NEWS	12	AUG 15	RDISCLOSURE: one FREE connect hour, per account, in September 2003
NEWS	13	AUG 15	TEMA: one FREE connect hour, per account, in

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September 2003

NEWS 14 AUG 18 Data available for download as a PDF in RDISCLOSURE
NEWS 15 AUG 18 Simultaneous left and right truncation added to PASCAL
NEWS 16 AUG 18 FROSTI and KOSMET enhanced with Simultaneous Left and Right
Truncation
NEWS 17 AUG 18 Simultaneous left and right truncation added to ANABSTR
NEWS 18 SEP 22 DIPPR file reloaded
NEWS 19 SEP 25 INPADOC: Legal Status data to be reloaded
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=> file patents

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FILE 'WPINDEX' ACCESS NOT AUTHORIZED

=> solubilization and buffer

21 FILES SEARCHED...

L1 17957 SOLUBILIZATION AND BUFFER

=> inclusion with bodies

8 FILES SEARCHED...

21 FILES SEARCHED...

L2 10326 INCLUSION WITH BODIES

=> solubilization with buffer

9 FILES SEARCHED...

21 FILES SEARCHED...

L3 609 SOLUBILIZATION WITH BUFFER

=> (sodium with hydroxide) and (NaOH)

8 FILES SEARCHED...

16 FILES SEARCHED...

21 FILES SEARCHED...

L4 99871 (SODIUM WITH HYDROXIDE) AND (NAOH)

=> l2 and l3 and l4

16 FILES SEARCHED...

26 FILES SEARCHED...

L5 3 L2 AND L3 AND L4

=> d ab

L5 ANSWER 1 OF 3 USPATFULL on STN

AB This invention entails a method for solubilizing and recovering, in bioactive and isolated form with retained native state configuration, a target peptide from a host organism in which the heterologous polypeptide is present in insoluble form. Broadly this method comprises (i) disrupting the host cell to produce a lysate (ii) recovering lysate precipitate containing the polypeptide (iii) resuspending the lysate precipitate in a denaturant-free, non-buffered solubilization solution

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to produce a solubilization preparation that comprises both **sodium hydroxide** between about 8 and about 10 mM and the target peptide between about 1 and about 4 mg peptide per ml solubilization solution, wherein the resultant solubilization preparation has a pH of between about 9 and about 11.2; (iv) recovering supernatant from the solubilization preparation containing non-denatured target peptide. Optionally, stabilizing compounds and detergents are employed. The invention further comprises isolated insoluble proteins in bioactive form and native state configuration.

=> d ab 2

L5 ANSWER 2 OF 3 USPATFULL on STN

AB Disclosed are novel proteins, referred to as tumor necrosis factor binding proteins, that modulate the activity of tumor necrosis factor. Also disclosed are processes for obtaining the tumor necrosis binding proteins by recombinant genetic engineering techniques.

=> d bib 2-3

L5 ANSWER 2 OF 3 USPATFULL on STN

AN 2003:78519 USPATFULL

TI Truncated soluble tumor necrosis factor type-I and type-II receptors

IN Fisher, Eric F., New Braunfels, TX, UNITED STATES

Edwards, Carl K., III, Superior, CO, UNITED STATES

Kieft, Gary L., Boulder, CO, UNITED STATES

PA Amgen Inc. (U.S. corporation)

PI US 2003054439 A1 20030320

AI US 2001-882735 A1 20010615 (9)

RLI Continuation of Ser. No. US 1999-214613, filed on 8 Jan 1999, ABANDONED

A 371 of International Ser. No. WO 1997-US12244, filed on 9 Jul 1997,

UNKNOWN

PRAI US 1997-39792P 19970304 (60)

US 1997-39314P 19970207 (60)

US 1997-37737P 19970123 (60)

US 1996-32534P 19961206 (60)

US 1996-21443P 19960709 (60)

DT Utility

FS APPLICATION

LREP AMGEN INCORPORATED, MAIL STOP 27-4-A, ONE AMGEN CENTER DRIVE, THOUSAND

OAKS, CA, 91320-1799

CLMN Number of Claims: 31

ECL Exemplary Claim: 1

DRWN 13 Drawing Page(s)

LN.CNT 4745

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 3 OF 3 USPATFULL on STN

AN 2002:258433 USPATFULL

TI Anti-CD3 immunotoxins and therapeutic uses therefor

IN Digan, Mary Ellen, Morristown, NJ, UNITED STATES

Lake, Philip, Morris Plains, NJ, UNITED STATES

Wright, Richard Michael, Annandale, NJ, UNITED STATES

PI US 2002142000 A1 20021003

AI US 2000-480236 A1 20000110 (9)

DT Utility

FS APPLICATION

16/10/200316:24protein purification.trn

LREP THOMAS HOXIE, NOVARTIS CORPORATION, PATENT AND TRADEMARK DEPT, 564
MORRIS AVENUE, SUMMIT, NJ, 079011027
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 23 Drawing Page(s)
LN.CNT 2935
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> FIL STNGUIDE

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LAST RELOADED: Oct 3, 2003 (20031003/UP).

=> file caplus file medline file biosis

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FILE 'BIOSIS' ENTERED AT 11:46:00 ON 08 OCT 2003
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=> solubilization with preparation

L6 107 SOLUBILIZATION WITH PREPARATION

=> inclusion with bodies

L7 25388 INCLUSION WITH BODIES

=> (sodium with hydroxide) or (NaOH)

L8 380040 (SODIUM WITH HYDROXIDE) OR (NAOH)

=> l6 and l7 and l8

L9 1 L6 AND L7 AND L8

=> d

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:696439 CAPLUS

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DN 139:212998
TI Methods for the solubilization and recovery of recombinant proteins
IN Gonzalez-Villasenor, Lucia Irene
PA USA
SO U.S. Pat. Appl. Publ., 21 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 2003166062	A1	20030904	US 2002-80919	20020222
PRAI	US 2001-270839P	P	20010223		

=> solubil?

L10 402441 SOLUBIL?

=> 17 and 18 and 19

L11 1 L7 AND L8 AND L9

=> d

L11 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:696439 CAPLUS
DN 139:212998
TI Methods for the solubilization and recovery of recombinant proteins
IN Gonzalez-Villasenor, Lucia Irene
PA USA
SO U.S. Pat. Appl. Publ., 21 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 2003166062	A1	20030904	US 2002-80919	20020222
PRAI	US 2001-270839P	P	20010223		

=> 17 and 18 and l10

L12 18 L7 AND L8 AND L10

=> d ti 1-10

L12 ANSWER 1 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Methods for the **solubilization** and recovery of recombinant proteins

L12 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI cDNA cloning of growth hormone from giant panda (Ailuropoda melanoleuca) and its expression in Escherichia coli

L12 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI cDNA cloning of growth hormone from giant panda (Ailuropoda melanoleuca) and its expression in Escherichia coli

L12 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Method for purifying recombinant proteins expressed as insoluble

16/10/200316:24protein purification.trn

aggregates

- L12 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Mechanical properties of lignocellulosics/bioplastic composites
- L12 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Production of a biologically active novel goldfish growth hormone in *Escherichia coli*
- L12 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Extraction of polypeptide **inclusion bodies** from expression hosts with a two-phase aqueous system with **solubilization** and renaturation of the polypeptide
- L12 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Method for **solubilization** and naturation of somatotropins utilizing low urea concentration
- L12 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Expression of plant genes in transfected mammalian cells: accumulation of recombinant preLHCIIb proteins within cytoplasmic **inclusion bodies**
- L12 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Characteristics of proteins of granulosis viral **inclusion bodies** of the cabbage butterfly *Pieris brassicae* L (Lepidoptera:Pieridae)

=> d ab bib 2-10

- L12 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AB A cDNA encoding *Ailuropoda melanoleuca* growth hormone (AmGH) was isolated from pituitary total RNA using RT-PCR and expressed in *Escherichia coli*. This is the first report of a GH nucleotide and amino acid (aa) sequence from giant panda. The open reading frame of AmGH (651 bp) encodes a precursor of 216 aa comprising a 26 aa signal peptide and a 190 aa mature protein with four cysteine residues similar to the typical primary structure of mammalian GH precursor. AmGH shares a high degree of identity (54-98.9%) with that of mammals, birds and amphibians, but a very low identity with bony fish GH (only 20-30%). The mature AmGH exhibits striking similarity to that of putative ancestral GH with a difference of only two residues, indicating a very slow basal rate of mol. evolution. The DNA fragment encoding mature AmGH was then subcloned into the pGEX-4T-1 expression vector and highly expressed in *E. coli* host BL21 with IPTG induction. The expressed proteins fused to GST were found to be sequestered into **inclusion bodies** and therefore the NaOH method was employed to **solubilize** the **inclusion bodies**; the proteins were further purified by Glutathione Sepharose 4B affinity chromatog. The prodn. and purifn. of GST-AmGH reported here provide a basis for further studies on the biol. activity of AmGH.
- AN 2003:522117 CAPLUS
DN 139:207922
TI cDNA cloning of growth hormone from giant panda (*Ailuropoda melanoleuca*) and its expression in *Escherichia coli*
- AU Liao, Ming Juan; Zhu, Mu Yuan; Zheng, Xu; Zhang, Zhi He; Zhang, An Ju
CS State Key Laboratory of Plant Physiology and Biochemistry, College of Life Sciences, Zhejiang University, Hangzhou, 310012, Peop. Rep. China

16/10/200316:24protein purification.trn

SO Comparative Biochemistry and Physiology, Part B: Biochemistry & Molecular
Biology (2003), 135B(1), 109-116
CODEN: CBPBB8; ISSN: 1096-4959

PB Elsevier Science Inc.

DT Journal

LA English

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN

AB A cDNA encoding Ailuropoda melanoleuca growth hormone (AmGH) was isolated from pituitary total RNA using RT-PCR and expressed in Escherichia coli. This is the first report of a GH nucleotide and amino acid (aa) sequence from giant panda. The open reading frame of AmGH (651 bp) encodes a precursor of 216 aa comprising a 26 aa signal peptide and a 190 aa mature protein with four cysteine residues similar to the typical primary structure of mammalian GH precursor. AmGH shares a high degree of identity (54-98.9%) with that of mammals, birds and amphibians, but a very low identity with bony fish GH (only 20-30%). The mature AmGH exhibits striking similarity to that of putative ancestral GH with a difference of only two residues, indicating a very slow basal rate of mol. evolution. The DNA fragment encoding mature AmGH was then subcloned into the pGEX-4T-1 expression vector and highly expressed in E. coli host BL21 with IPTG induction. The expressed proteins fused to GST were found to be sequestered into **inclusion bodies** and therefore the **NaOH** method was employed to **solubilize** the **inclusion bodies**; the proteins were further purified by Glutathione Sepharose 4B affinity chromatog. The prodn. and purifn. of GST-AmGH reported here provide a basis for further studies on the biol. activity of AmGH.

AN 2003:407259 CAPLUS

TI cDNA cloning of growth hormone from giant panda (Ailuropoda melanoleuca) and its expression in Escherichia coli

AU Liao, Ming Juan; Zhu, Mu Yuan; Zheng, Xu; Zhang, Zhi He; Zhang, An Ju

CS College of Life Sciences, State Key Laboratory of Plant Physiology and Biochemistry, Zhejiang University, PRHangzhou, 310012, Peop. Rep. China

SO Comparative Biochemistry and Physiology, Part B: Biochemistry & Molecular Biology (2003), B135(1), 109-116
CODEN: CBPBB8; ISSN: 1096-4959

PB Elsevier Science Inc.

DT Journal

LA English

L12 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN

AB The invention relates to a method for **solubilizing** and purifying recombinant proteins, which are expressed in bacterial host cells and deposited as insol. aggregates (**inclusion bodies**). The purifn. is based on the conversion of the **inclusion bodies** into sol. forms while using org. denaturation reagents and on the use of chromatog. methods. To this end, inorg., alk. mobile solvents that contain salt are selected, which, after a purifn., make it possible to provide the recombinant proteins after neutralization in a physiol. acceptable form, which can be directly employed for medical use. The method is particularly suited for purifying allergens and allergen fragments.

AN 2002:185154 CAPLUS

DN 136:252566

TI Method for purifying recombinant proteins expressed as insoluble aggregates

16/10/200316:24protein purification.trn

IN Suck, Roland; Cromwell, Oliver; Fiebig, Helmut
PA Merck Patent G.m.b.H., Germany
SO PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002020559	A1	20020314	WO 2001-EP9552	20010818
	W:				
					AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
	RW:				GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
	DE 10044360	A1	20020321	DE 2000-10044360	20000908
	AU 2001087695	A5	20020322	AU 2001-87695	20010818
	EP 1315740	A1	20030604	EP 2001-967286	20010818
	R:				AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
	US 2003170815	A1	20030911	US 2003-363788	20030307
PRAI	DE 2000-10044360	A	20000908		
	WO 2001-EP9552	W	20010818		

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN

AB The mech. properties of composites made of lignocellulosic fibers and bioplastics were investigated. Several lignocellulosics, e.g. sisal, sugarcane bagasse, wood flour (*Pinus elliottii*), cellulose pulp, rice husks, vegetal sponge (*Luffa cylindrica*), and lignin were tested. Poly-D-(-3-hydroxybutyrate) (I) is a bioplastic, a thermoplastic polyester, produced by microorganisms, so-called polyhydroxyalkanoates (PHAs), which constitute a class of natural polymers with phys. characteristics close to those of synthetic polymers, with the addnl. property of being completely biodegradable to CO₂ and water through natural microbiol. mineralization, although it is water-resistant. Such polyesters are synthesized by bacteria from saccharides or other C sources and stored as intracellular **inclusion bodies**. Among these polymers, the best known PHA is I. The prepn. of lignocellulosics/I composites was done by mixing the components, and they were molded into specimens by injection molding techniques according to ASTM std. A load of lignocellulosic fibers in ratio of 15 wt.% was used. Dimensional stability, d., behavior toward some chem. reagents (**soly.** %) and tests of mech. properties, e.g. elongation at break, tensile and flexural strength, and tensile and flexural modulus, of the composites with different lignocellulosic fibers were evaluated. The results indicate that dimensional stability (immersion in water and oven drying at 100.degree., both for 24 h), d. (.apprxeq. 1.20 g/cm³), and mech. properties of composites were similar, as compared to pure I. Bagasse/I composites showed a decrease in the mech. properties, as compared to pure I and the other composites. The composites showed good resistance to attack by chem. reagents (**NaOH**, HCl, NaCl, and CH₃COOH immersed sep. in aq. soln. (1.0 mol/L) of the reagents for 24 h at 25.degree. using a composite-liquor ratio 1:100), with the exception of bagasse and rice

16/10/200316:24protein purification.trn

husks/composites, which had low resistance to **NaOH**. The results showed that these lignocellulosic fibers could be used as excellent reinforcing materials for low cost composites and are able to satisfy economics, as well as ecol. interests.

AN 2001:880593 CAPLUS

DN 136:327237

TI Mechanical properties of lignocellulosics/bioplastic composites

AU Caraschi, Jose Claudio; Leao, Alcides Lopes

CS Dept. of Environmental Sciences - College of Agricultural Sciences, UNESP, Botucatu, 18603-970, Brazil

SO Brazilian Symposium on the Chemistry of Lignins and Other Wood Components, Proceedings, 6th, Guaratingueta, Brazil, Oct. 25-28, 1999 (2001), Meeting Date 1999, 113-118. Editor(s): Silva, Flavio Teixeira; Ferraz, Andre; Paiva, Teresa Cristina Brazil. Publisher: Faculdade de Engenharia Quimica de Lorena, Lorena, Brazil.

CODEN: 69CAX2

DT Conference

LA English

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN

AB Goldfish pituitary contains two types of growth hormones. One with five cysteine residues (type-I) similar to other Cyprinid GHs, and the other with four Cys residues (type-II) similar to those of other fish and teleost species. Recombinant goldfish type II GH (gfGH-II) was produced in *Escherichia coli* using the pRSETB expression vector. The gfGH-II was produced fused to a leader sequence, which sequestered into **inclusion bodies** after expression. The **inclusion bodies** were **solubilized** using **sodium hydroxide** and the fusion protein purified by chelating affinity chromatog. Subsequently, gfGH-II was cleaved and analyzed by Western blotting, using a specific antiserum. For comparison the authors also produced recombinant common carp GH (cGH) which has 95% similarity to gfGH-II, and tested their growth promoting activity in goldfish. Both forms of GH significantly increased the growth rate of goldfish, although cGH was found to have a somewhat higher potency than gfGH-II.

AN 1998:725857 CAPLUS

DN 130:62667

TI Production of a biologically active novel goldfish growth hormone in *Escherichia coli*

AU Mahmoud, Soheil S.; Wang, Shuli; Moloney, Maurice M.; Habibi, Hamid R.

CS Department of Biological Sciences, University of Calgary, Calgary, AB, T2N 1N4, Can.

SO Comparative Biochemistry and Physiology, Part B: Biochemistry & Molecular Biology (1998), 120B(4), 657-663

CODEN: CBPBB8; ISSN: 0305-0491

PB Elsevier Science Inc.

DT Journal

LA English

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN

AB A method is described for isolating an exogenous polypeptide in a non-native conformation from cells, such as an aq. fermn. broth. The **inclusion bodies** are incubated in a soln. of a chaotropic agent contg., preferably, a reducing agent and with

phase-forming species to form multiple aq. phases, with one of the phases being enriched in the polypeptide and depleted in the biomass solids and nucleic acids originating from the cells. The method results in two aq. phases, with the upper phase being enriched in the polypeptide. A large scale (1200 L) fermn. of Escherichia coli accumulating **inclusion bodies** of insulin-like growth factor 1 as a result of expression of the cloned gene was lysed with urea 174 kg and dithiothreitol 2.9 kg and brought to pH 10 with **NaOH**. The lysate was mixed with PEG-8000 250 and sodium sulfate 90 kg and the phases allowed to sep. The upper phase contained 88% of the total IGF-1 in the prepn. The upper phase was collected and neutralized to ppt. the IGF-1 and the pptd. material was resuspended in a folding medium of urea 10, NaCl 1 M, EtOH 19 vol%, glycine 20 mM, copper 0.5 .mu.M, DTT 1mM pH 10.5. Renaturation had reached a plateau at 3 h with a 50% yield of folded IGF-1.

AN 1995:610625 CAPLUS

DN 123:8040

TI Extraction of polypeptide **inclusion bodies** from expression hosts with a two-phase aqueous system with **solubilization** and renaturation of the polypeptide

IN Builder, Stuart; Hart, Roger; Lester, Philip; Ogez, John; Reifsnyder, David

PA Genentech, Inc., USA

SO PCT Int. Appl., 69 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9506059	A1	19950302	WO 1994-US9089	19940810
	W: AU, CA, JP, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5407810	A	19950418	US 1993-110663	19930820
	CA 2167910	AA	19950302	CA 1994-2167910	19940810
	AU 9475616	A1	19950321	AU 1994-75616	19940810
	AU 673624	B2	19961114		
	EP 714403	A1	19960605	EP 1994-925830	19940810
	EP 714403	B1	19980610		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 09501931	T2	19970225	JP 1994-507623	19940810
	AT 167193	E	19980615	AT 1994-925830	19940810
	ES 2119222	T3	19981001	ES 1994-925830	19940810
	US 5723310	A	19980303	US 1995-385187	19950207
	US 5695958	A	19971209	US 1995-446882	19950517
PRAI	US 1993-110663		19930820		
	WO 1994-US9089		19940810		
	US 1994-318627		19941011		
	US 1995-385187		19950207		

L12 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN

AB Somatotropins are **solubilized** and renatured from refractile bodies using a combination of low urea (1.8-2.2M) and aq. alk. soln. Bovine somatotropin from recombinant Escherichia coli refractile bodies was recovered in 48% yield using 2M urea and **NaOH** to adjust the pH to 12.0.

AN 1991:528528 CAPLUS

DN 115:128528

TI Method for **solubilization** and naturation of somatotropins utilizing low urea concentration

16/10/200316:24protein purification.trn

IN McCoy, Kevin Michael
PA American Cyanamid Co., USA
SO Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 432419	A1	19910619	EP 1990-120309	19901023
	EP 432419	B1	19941019		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	ES 2062253	T3	19941216	ES 1990-120309	19901023
	IL 96124	A1	19980615	IL 1990-96124	19901025
	JP 03181500	A2	19910807	JP 1990-331005	19901130
	CA 2031369	AA	19910606	CA 1990-2031369	19901203
	FI 9005985	A	19910606	FI 1990-5985	19901204
	FI 97296	B	19960815		
	FI 97296	C	19961125		
	AU 9067736	A1	19910613	AU 1990-67736	19901204
	AU 628695	B2	19920917		
	ZA 9009745	A	19911030	ZA 1990-9745	19901204
	HU 58762	A2	19920330	HU 1990-8077	19901205
	HU 214249	B	19980302		
PRAI	US 1989-446280		19891205		

L12 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN

AB Transfection of the monkey COS-7 cells with an expression vector bearing the Lemma gibba LHCIIB AB30 or AB19 genes led to the synthesis of the LHCIIB polypeptide precursors (preLHCIIB). This was inferred mainly from Western blot anal. which has revealed the appearance of a single immunopptn. band following the use of 3 different preps. of anti-LHCIIB antibodies. Synthesis of the precursor polypeptides, not the mature processed LHCIIB protein, was evident from the mol. wt. of the newly synthesized protein, inferred from its position in the gel. Expression of the AB30 and AB19 genes was also evident from the appearance of specific transcripts only in transfected cells. Immunofluorescence observations revealed the appearance of distinct fluorescent spots in about 1-2% of the transfected cells. The same was obsd. following immunogold staining and electron microscopy studies, which revealed a specific assocn. of gold particles with amorphous structures only in transfected cells. The preLHCIIB synthesized by transfected COS-7 cells was insol. in a variety of detergents and could be **solubilized** only by 8M urea or 0.1N **NaOH**. These properties are characteristic of proteins accumulating within **inclusion bodies** of prokaryotes.

AN 1991:56871 CAPLUS

DN 114:56871

TI Expression of plant genes in transfected mammalian cells: accumulation of recombinant preLHCIIB proteins within cytoplasmic **inclusion bodies**

AU Broido, S.; Loyter, A.; Vainstein, A.

CS Inst. Life Sci., Hebrew Univ. Jerusalem, Jerusalem, Israel

SO Experimental Cell Research (1991), 192(1), 248-55

CODEN: ECREAL; ISSN: 0014-4827

DT Journal

LA English

L12 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN

AB A 28,200-mol.-wt. protein was isolated from viral granules isolated from

16/10/200316:24protein purification.trn

the cabbage butterfly by **solubilization** in CO32--saline soln. (pH 10.95) or in 67% AcOH, followed by centrifugation and isoelec. focussing. **Solubilization** in alk. medium resulted in the formation of 4 polypeptide fractions (mol. wts. 6000, 16,000, 19,500, and 60,300) which were apparently dimers and trimers of the 28,200-mol.-wt. protein. **Solubilization** in acidic medium produced 4 fractions with mol. wts. of 67,600, 87,100, 100,000, and 117,500. In 0.1N **NaOH**, the viral protein formed a single component with a sedimentation coeff. of 1.8 S and mol. wt. of 28,200 daltons. Amino acid anal. revealed 18 components, with aspartate, glutamate, and leucine as the major components.

AN 1984:206258 CAPLUS
DN 100:206258
TI Characteristics of proteins of granulosis viral **inclusion bodies** of the cabbage butterfly *Pieris brassicae* L (Lepidoptera:Pieridae)
AU Eglite, G.; Putnaer, G. E.
CS USSR
SO LLA Raksti (1983), 207, 54-60
CODEN: LLRADG; ISSN: 0233-917X
DT Journal
LA Russian

=> d bib ab 11-18

L12 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1977:102851 CAPLUS
DN 86:102851
TI Mineral contents and chemical dissolution of the polyhedral **inclusion bodies** of the nucleopolyhedrosis virus of *Amsacta albistriga* Wlk
AU Narayanan, K.; Govindarajan, R.; Jayaraj, S.
CS Dep. Agric. Entomol., Tamil Nadu Agric. Univ., Coimbatore, India
SO Current Science (1977), 46(3), 82-3
CODEN: CUSCAM; ISSN: 0011-3891
DT Journal
LA English
AB Mineral anal. of polyhedral **inclusion bodies** (PIB) of *A. albistriga* nucleopolyhedrosis virus (NPV) revealed the presence of high concns. of Ca (1.6%), Fe (0.6%), K (0.2.8%), and Zn (0.2%), but low contents of Mg (0.05%), P (0.04%), Cu (0.02%), and Mn (0.025%). When treated with >0.2% KOH or **NaOH**, the PIB lost their refractile nature within 60 s and became black, dense, dot-like granules. The PIB were insol. in low concns. of alkali, salts, and org. solvents. No dissoln. was obsd. in 5-20% formalin even after 1 h of treatment.

L12 ANSWER 12 OF 18 MEDLINE on STN
AN 2003256635 IN-PROCESS
DN 22666169 PubMed ID: 12781978
TI cDNA cloning of growth hormone from giant panda (*Ailuropoda melanoleuca*) and its expression in *Escherichia coli*.
AU Liao Ming Juan; Zhu Mu Yuan; Zheng Xu; Zhang Zhi He; Zhang An Ju
CS State Key Laboratory of Plant Physiology and Biochemistry, College of Life Sciences, Zhejiang University, Hangzhou, 310012 PR China.
SO COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY. PART B, BIOCHEMISTRY AND MOLECULAR BIOLOGY, (2003 May) 135 (1) 109-16.
Journal code: 9516061. ISSN: 1096-4959.
CY England: United Kingdom

16/10/200316:24protein purification.trn

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20030604
Last Updated on STN: 20030628
AB A cDNA encoding Ailuropoda melanoleuca growth hormone (AmGH) was isolated from pituitary total RNA using RT-PCR and expressed in Escherichia coli. This is the first report of a GH nucleotide and amino acid (aa) sequence from giant panda. The open reading frame of AmGH (651 bp) encodes a precursor of 216 aa comprising a 26 aa signal peptide and a 190 aa mature protein with four cysteine residues similar to the typical primary structure of mammalian GH precursor. AmGH shares a high degree of identity (54-98.9%) with that of mammals, birds and amphibians, but a very low identity with bony fish GH (only 20-30%). The mature AmGH exhibits striking similarity to that of putative ancestral GH with a difference of only two residues, indicating a very slow basal rate of molecular evolution. The DNA fragment encoding mature AmGH was then subcloned into the pGEX-4T-1 expression vector and highly expressed in E. coli host BL21 with IPTG induction. The expressed proteins fused to GST were found to be sequestered into **inclusion bodies** and therefore the **NaOH** method was employed to **solubilize** the **inclusion bodies**; the proteins were further purified by Glutathione Sepharose 4B affinity chromatography. The production and purification of GST-AmGH reported here provide a basis for further studies on the biological activity of AmGH.

L12 ANSWER 13 OF 18 MEDLINE on STN
AN 1999071977 MEDLINE
DN 99071977 PubMed ID: 9854813
TI Production of a biologically active novel goldfish growth hormone in Escherichia coli.
AU Mahmoud S S; Wang S; Moloney M M; Habibi H R
CS Department of Biological Sciences, University of Calgary, Alberta, Canada.
SO COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY. PART B, BIOCHEMISTRY AND MOLECULAR BIOLOGY, (1998 Aug) 120 (4) 657-63.
Journal code: 9516061. ISSN: 1096-4959.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199901
ED Entered STN: 19990202
Last Updated on STN: 20000303
Entered Medline: 19990119
AB Goldfish pituitary contains two types of growth hormones. One with five cysteine residues (type-I) similar to other Cyprinid GHs, and the other with four Cys residues (type-II) similar to those of other fish and tertapod species. Recombinant goldfish type II GH (gfGH-II) was produced in Escherichia coli using the pRSETB expression vector. The gfGH-II was produced fused to a leader sequence, which sequestered into **inclusion bodies** after expression. The **inclusion bodies** were **solubilized** using **sodium hydroxide** and the fusion protein purified by chelating affinity chromatography. Subsequently, gfGH-II was cleaved and analyzed by Western blotting, using a specific antiserum. For comparison we also produced recombinant common carp GH (cGH) which has 95% similarity to gfGH-II, and tested their growth promoting activity in goldfish. Both forms of GH significantly increased the growth rate of goldfish ($P < 0.05$), although cGH was found to have a somewhat higher potency than

16/10/200316:24protein purification.trn

gfGH-II.

L12 ANSWER 14 OF 18 MEDLINE on STN
AN 91078373 MEDLINE
DN 91078373 PubMed ID: 1984416
TI Expression of plant genes in transfected mammalian cells: accumulation of recombinant preLHCIIb proteins within cytoplasmic **inclusion bodies**.
AU Broido S; Loyter A; Vainstein A
CS Department of Biological Chemistry, Hebrew University of Jerusalem, Israel.
SO EXPERIMENTAL CELL RESEARCH, (1991 Jan) 192 (1) 248-55.
Journal code: 0373226. ISSN: 0014-4827.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199101
ED Entered STN: 19910322
Last Updated on STN: 19910322
Entered Medline: 19910130
AB Transfection of the monkey COS-7 cells with an expression vector bearing the Lemma gibba LHCIIb AB30 or AB19 genes led to the synthesis of the LHCIIb polypeptide precursors (preLHCIIb). This was inferred mainly from Western blot analysis which has revealed the appearance of a single immunoprecipitation band following the use of three different preparations of anti-LHCIIb antibodies. Synthesis of the precursor polypeptides, not the mature processed LHCIIb protein, was evident from the molecular weight of the newly synthesized protein, inferred from its position in the gel. Expression of the AB30 and AB19 genes was also evident from the appearance of specific transcripts only in transfected cells. Immunofluorescence observations revealed the appearance of distinct fluorescent spots in about 1-2% of the transfected cells. The same was observed following immunogold staining and electron microscopy studies, which revealed a specific association of gold particles with amorphous structures only in transfected cells. The preLHCIIb synthesized by transfected COS-7 cells was insoluble in a variety of detergents and could be **solubilized** only by 8 M urea or 0.1 N **NaOH**. These properties are characteristic of proteins accumulating within **inclusion bodies** of prokaryotes.

L12 ANSWER 15 OF 18 MEDLINE on STN
AN 74030839 MEDLINE
DN 74030839 PubMed ID: 4356630
TI Lead-induced **inclusion bodies**. **Solubility**, amino acid content, and relationship to residual acidic nuclear proteins.
AU Moore J F; Goyer R A; Wilson M
SO LABORATORY INVESTIGATION, (1973 Nov) 29 (5) 488-94.
Journal code: 0376617. ISSN: 0023-6837.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197401
ED Entered STN: 19900310
Last Updated on STN: 19970203
Entered Medline: 19740116

L12 ANSWER 16 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN

16/10/200316:24protein purification.trn

AN 2003:373123 BIOSIS
DN PREV200300373123
TI cDNA cloning of growth hormone from giant panda (*Ailuropoda melanoleuca*) and its expression in *Escherichia coli*.
AU Liao, Ming Juan; Zhu, Mu Yuan (1); Zheng, Xu; Zhang, Zhi He; Zhang, An Ju
CS (1) State Key Laboratory of Plant Physiology and Biochemistry, College of Life Sciences, Zhejiang University, Hangzhou, 310012, China: lsczhumy@mail.hz.zj.cn China
SO Comparative Biochemistry and Physiology Part B Biochemistry & Molecular Biology, (May 2003, 2003) Vol. 135B, No. 1, pp. 109-116. print. ISSN: 1096-4959.
DT Article
LA English
AB A cDNA encoding *Ailuropoda melanoleuca* growth hormone (AmGH) was isolated from pituitary total RNA using RT-PCR and expressed in *Escherichia coli*. This is the first report of a GH nucleotide and amino acid (aa) sequence from giant panda. The open reading frame of AmGH (651 bp) encodes a precursor of 216 aa comprising a 26 aa signal peptide and a 190 aa mature protein with four cysteine residues similar to the typical primary structure of mammalian GH precursor. AmGH shares a high degree of identity (54-98.9%) with that of mammals, birds and amphibians, but a very low identity with bony fish GH (only 20-30%). The mature AmGH exhibits striking similarity to that of putative ancestral GH with a difference of only two residues, indicating a very slow basal rate of molecular evolution. The DNA fragment encoding mature AmGH was then subcloned into the pGEX-4T-1 expression vector and highly expressed in *E. coli* host BL21 with IPTG induction. The expressed proteins fused to GST were found to be sequestered into **inclusion bodies** and therefore the **NaOH** method was employed to **solubilize** the **inclusion bodies**; the proteins were further purified by Glutathione Sepharose 4B affinity chromatography. The production and purification of GST-AmGH reported here provide a basis for further studies on the biological activity of AmGH.

L12 ANSWER 17 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:8909 BIOSIS
DN PREV199900008909
TI Production of a biologically active novel goldfish growth hormone in *Escherichia coli*.
AU Mahmoud, Soheil S.; Wang, Shuli; Moloney, Maurice M.; Habibi, Hamid R. (1)
CS (1) Dep. Biological Sci., Univ. Calgary, Calgary, AB T2N 1N4 Canada
SO Comparative Biochemistry and Physiology B, (Aug., 1998) Vol. 120, No. 4, pp. 657-663. ISSN: 0305-0491.
DT Article
LA English
AB Goldfish pituitary contains two types of growth hormones. One with five cysteine residues (type-I) similar to other Cyprinid GHs, and the other with four Cys residues (type-II) similar to those of other fish and teleost species. Recombinant goldfish type II GH (gfGH-II) was produced in *Escherichia coli* using the pRSETB expression vector. The gfGH-II was produced fused to a leader sequence, which sequestered into **inclusion bodies** after expression. The **inclusion bodies** were **solubilized** using **sodium hydroxide** and the fusion protein purified by chelating affinity chromatography. Subsequently, gfGH-II was cleaved and analyzed by Western blotting, using a specific antiserum. For comparison we also produced recombinant common carp GH (cGH) which has 95% similarity to gfGH-II, and tested their growth promoting activity in goldfish. Both forms of GH

16/10/200316:24protein purification.trn

significantly increased the growth rate of goldfish ($P < 0.05$), although cGH was found to have a somewhat higher potency than gFGH-II.

L12 ANSWER 18 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1991:113756 BIOSIS

DN BA91:61146

TI EXPRESSION OF PLANT GENES IN TRANSFECTED MAMMALIAN CELLS ACCUMULATION OF
RECOMBINANT PRE-LHCIIB PROTEINS WITHIN CYTOPLASMIC **INCLUSION**

BODIES.

AU BROIDO S; LOYTER A; VAINSTEIN A

CS DEP. HORTICULTURE, FAC. AGRIC., HEBREW UNIV. JERUSALEM, P.O. BOX 12,
REHOVOT 76100, ISRAEL.

SO EXP CELL RES, (1991) 192 (1), 248-255.

CODEN: ECREAL. ISSN: 0014-4827.

FS BA; OLD

LA English

AB Transfection of the monkey COS-7 cells with an expression vector bearing the Lemma gibba LHCIIB AB30 or AB19 genes led to the synthesis of the LHCIIB polypeptide precursors (preLHCIIB). This was inferred mainly from Western blot analysis which has revealed the appearance of a single immunoprecipitation band following the use of three different preparations of anti-LHCIIB antibodies. Synthesis of the precursor polypeptides, not the mature processed LHCIIB protein, was evident from the molecular weight of the newly synthesized protein, inferred from its position in the gel. Expression of the AB30 and AB19 genes was also evident from the appearance of specific transcripts only in transfected cells. Immunofluorescence observations revealed the appearance of distinct fluorescent spots in about 1-2% of the transfected cells. The same was observed following immunogold staining and electron microscopy studies, which revealed a specific association of gold particles with amorphous structures only in transfected cells. The preLHCIIB synthesized by transfected COS-7 cells was insoluble in a variety of detergents and could be **solubilized** only by 8 M urea or 0.1 N **NaOH**. These properties are characteristic of proteins accumulating within **inclusion bodies** of prokaryotes.

=> log y

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